

**BY ORDER OF THE COMMANDER
21ST SPACE WING**



AIR FORCE INSTRUCTION 21-101

**21ST SPACE WING
Supplement**

13 NOVEMBER 2012

Maintenance

**AIRCRAFT EQUIPMENT
MAINTENANCE MANAGEMENT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements and extends the guidance of Air Force Instruction (AFI) 21-101, *Aircraft Equipment Maintenance Management*, 26 July 2010. It provides guidance and procedures to effectively develop and manage a Crashed, Damaged, or Disabled Aircraft Recovery program, a Tool Control program, a Foreign Object Damage (FOD) prevention program, and a Dropped Object Prevention program. This instruction applies to all 21st Space Wing (21 SW) activities that provide host base responsibilities for flightline operations or conduct flightline activities. This does not apply to Air Force Reserve or National Guard units. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF IMT 847, *Recommendation of Change of Publication*; route AF IMT 847s from the field through the appropriate functional's chain of command. Ensure that all records created as a result of processes prescribed in the publication are maintained in accordance with AFMAN 33-363 *Management of Records* and dispose of in accordance with Air Force Records Information Management System (AFRIMS) Air Force Records Disposition Schedule (RDS) located at <https://www.mv.af.mil/gcss-af61a/afrims/afrims>. This publication may not be supplemented.

10.2.1. **(Added)** 21SW activities that use tools/equipment on the flightline, on aircraft, or on aerospace ground equipment or maintain support equipment that will be used on aircraft or on the flightline are required to establish a tool control program IAW this supplement and AFI21-101.

10.2.1.1.1. **(Added)** Tools will be accounted for at all times and secured when not in use.

10.2.1.2.1. **(Added)** An annual inventory of all tools will be conducted and documented on an AF IMT 2411.

10.2.1.3.1. **(Added)** Efforts should be focused on the purchase of tools covered by a warranty that supports easy replacement at no additional cost to the government.

10.2.1.4.1. **(Added)** Expendable/consumable tools and HAZMATs will be controlled and accounted for. They will only be utilized after the items stored in the Consolidated Tool Kit (CTK) are consumed.

10.2.1.5.1. **(Added)** Personnel will conduct and document a joint inventory of the tools if a transfer is required at the job site. Document the joint inventory on CAF FORM 140.

10.2.1.6.1. **(Added)** Every effort will be made to find a lost or missing tool immediately upon discovery. Aircraft/equipment forms will be documented IAW Lost Item/Tool Procedures in AFI21-101. The CTK inventory will be documented to indicate the tool is missing and will be annotated once the tool is replaced.

10.2.1.7.1. **(Added)** Tool Kits will be assigned an Equipment Identification Designator (EID) as outlined in AFI 21-101.

10.2.1.8.1. **(Added)** All individual Personal Protective Equipment (eg., ear protectors, reflective belts, and headsets) will be controlled and marked with an identifier that easily distinguishes the owner or workcenter.

10.2.1.9.4. **(Added)** Rags that leave the CTK area will be controlled. They will be issued on a one-for-one swap or issued in pre-packaged containers with the number of rags clearly marked on each container.

10.2.1.10.1. **(Added)** The number of personnel authorized to procure tools shall be kept to a minimum.

10.2.11.1. **(Added)** Locally manufactured or developed tools will be marked and controlled in the same manner as any other tool in the CTK.

10.2.1.12.1. **(Added)** Depot teams, factory representatives, and contract field teams will be monitored to ensure positive tool accountability when working on equipment within the unit.

10.2.1.13.1. **(Added)** Procedures will be standardized when two or more work centers utilize the same tool room.

10.2.1.14.1. **(Added)** Emergency response equipment (eg., Crashed Damaged or Disabled Aircraft Recovery and hydrazine response equipment) that is stored outside of the controlled tool room will be kept secured and issued when needed.

10.2.1.15.1. **(Added)** All CTKs will have a second party signature when signing a CTK back into the tool room. The same individual that signs out a CTK cannot be the person that signs it back in.

10.2.1.16.1. **(Added)** Access to tool rooms will be kept to a minimum.

10.2.1.17.1. **(Added)** Aircrew tool kits and flight equipment that are taken to the flightline will be controlled and marked with an identifier that easily distinguishes the owner or work center.

14.10.1.1. **(Added)** 21SW activities that provide host unit responsibilities for flightline operations will establish a CDDAR program IAW AFI21-101. Aircraft recovery procedures must be tailored specifically by each host base in order to address capabilities unique to its location. These procedures must be developed and collaborated jointly with all applicable host and tenant units and published in an Installation Publication or supplement to AFI21-101.

14.10.1.2. **(Added)** 21 SW/CC will:

14.10.1.2.1. **(Added)** Implement policy, plans and agreements to ensure compliance with established recovery programs.

14.10.1.2.2. **(Added)** Provide personnel/equipment/funds required to perform CDDAR operations. This includes funds to pay for any overtime that may be incurred by other DoD organizations such as Air Force Reserve personnel or contracted operations.

14.10.1.2.3. **(Added)** Maintain overall responsibility for recovery of host/tenant crashed, damaged, or disabled aircraft.

14.10.1.2.4. **(Added)** 21 CONS will provide contracting support for specialized equipment as necessary to support aircraft recovery operations, to include GSUs where 21 CONS provides support.

14.11.1. **(Added)** 21SW units that service or maintain aircraft (such as transient alert activities) will develop a Dropped Object Prevention (DOP) program IAW AFI-21-101. A wing DOP monitor will be appointed by the WG/CV.

14.11.1.1. **(Added)** Units will appoint a local DOP monitor to provide training requirements as outlined in AFI21-101.

14.11.1.2. **(Added)** Units will ensure maintenance/servicing personnel check proper fit and closure of doors, panels, or cowlings and serviceability of securing devices such as fasteners and nut plates. Deficiencies will be reported to pilot or aircrew member.

14.11.1.5. **(Added)** Local DOP monitors will investigate and report incidents to the Wing DOP monitor and home station DOP monitor of incident aircraft. (Wing POC is located in 21 OSS/MA)

14.19. **(Added)** Foreign Object Damage (FOD) Prevention Program. 21SW activities that work in, on, around, or travel through areas near aircraft or aerospace ground equipment will comply with FOD prevention as outlined in AFI21-101. All commanders will ensure compliance with this supplement and establish guidance, as required, so every precaution is taken to prevent FOD. As applicable, organizations must ensure newly assigned personnel receive FOD Prevention Orientation/Familiarization Briefing during in processing. The Newcomers' FOD briefing will be documented by the responsible organization. Airfield Management will ensure flightline driver's training program stresses the importance of FOD prevention, control of vehicles on the flightline, and precautions to be taken prior to driving onto the airfield hard surfaces from unpaved areas. Tenant units develop their own FOD programs but will still participate in the host program and comply with host base requirements.

14.19.4. **(Added)** Units will appoint a local FOD monitor to administer the FOD program, conduct FOD investigations and report to the Wing FOD monitor. (Wing POC is located in 21 OSS/MA)

14.19.5. **(Added)** Any aircraft maintenance activity discovering FO damage to any aircraft/engine will report findings to its Maintenance Officer/Supervisor and FOD representative. The Wing FOD Prevention NCO will be notified and, in turn, will contact the Wing Safety office and Airfield Management. The Maintenance Officer/Superintendent, Wing Safety Representative, or a Federal Aviation Administration (FAA) representative will impound the aircraft so the damage can be evaluated. No maintenance action will be accomplished without the concurrence of the impoundment official. The Wing FOD NCO and a representative from Wing Safety will jointly investigate FOD damage on all military aircraft. They will perform the initial investigation following AFI 91-204, *Safety Investigations and Reports*.

14.19.5.1.2. **(Added)** The Wing Safety office and FOD NCO will investigate the FOD mishap and provide an initial report, in accordance with AFI 91-204, of all circumstances surrounding the incident. The 21 SW/CV, 21 MSG/CC, and 21 OG/CC will be briefed within 12 hours of the incident and reporting will be done in accordance with AFI 91-204.

14.19.5.1.3. **(Added)** The Wing FOD Prevention NCO or Wing Safety will give a written end report, on each FOD incident, to the 21 SW/CV NLT seven working days after completion of the investigation. The report will be in accordance with the format in AFI 91-204.

14.19.5.1.4. **(Added)** The Wing FOD Prevention NCO will ensure the written end report is coordinated through the Wing Safety office, 21 MSG/CC, and 21 OG/CC prior to being sent to the 21 SW/CV for review and signature.

14.19.6. **(Added)** The Wing FOD Prevention NCO will develop the FOD Prevention Committee meeting agenda and brief the committee which is made up of representatives from activities that frequent the flightline. The committee will meet quarterly, unless the MAJCOM standard FOD rate is exceeded. In the event that MAJCOM standards are exceeded, the committee will meet monthly until the standards are met. The committee chairperson may direct additional meetings as necessary.

14.19.6.1.1.1. **(Added)** The Wing FOD Prevention NCO will be appointed by the 21 SW/CV in writing. The appointee should have an aircraft maintenance background when possible.

14.19.6.1.1.2. **(Added)** The 21 OG/CC, or delegated representative, will serve as wing FOD Prevention Committee Chairperson. He/she will monitor all phases of the program implementation within the wing to ensure the FOD incidents are thoroughly investigated and adequate corrective action is taken.

14.19.7. **(Added)** Bird damage to engines is not chargeable as FOD, but must be investigated and documented. Such incidents are reportable under the Bird/Wildlife Aircraft Strike Hazard Program. Contact the wing FOD monitor and Wing Safety with details as soon as possible after discovering bird related engine damage.

CHRIS D. CRAWFORD, Colonel, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 10-206, *Operational Reporting*, 6 September 2011

AFI 10-2501, *Air Force Emergency Management Program Planning and Operations*, 4 January 2007

AFI 21-101, *Aerospace Equipment Maintenance Management*, 26 July 2010

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, 26 January 2012

AFI 51-503, *Aerospace Accident Investigation*, 26 May 2010

AFI 91-204, *Safety Investigations and Reports*, 24 Sep 2008

TO 00-105E-9, *Aircraft Emergency Rescue Information Aerospace Emergency Rescue and Mishap Response Information* ., 31 March 201 <http://www.dodffcert.com/00-105E-9/index.cfm>

Adopted Forms

AF IMT 847, *Recommendation for Change of Publication*

AF IMT 2411, *Inspection Document*

CAF FORM 140, *CTK Inventory and Control Log*

Abbreviations and Acronym

AGE—Aerospace Ground Equipment

CDDAR—Crashed, Damaged, or Disabled Aircraft Recovery

CES—Civil Engineering Squadron

CONS—Contracting Squadron

CRT—Crash Recovery Team

CRTC—Crash Recovery Team Chief

LRS—Logistics Readiness Squadron

MDS—Mission Design Series

MOC—Maintenance Operations Center

NDA—National Defense Area

OPR—Office of Primary Responsibility

OSC—On-Scene Commander

PICC—Peterson Installation Control Center

POC—Point of Contact

PPE—Personal Protective Equipment

RDS—Records Disposition Schedule

SFS—Security Forces Squadron

SW—Space Wing

TO—Technical Order